



MS ISO/IEC 17025
TESTING
SAMM No.0826

Exhibit 7B: SAR Test Report Photographs

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Tiong

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Report Revision History

Date	Revision	Comments
02/14/2018	A	Initial release

1.0 Highest SAR Test Position per body location

1.1 Body

DUT with antenna HAD9743A with offered battery PMNN4072A and body worn kit RLN5383A w/ NTN5243A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	0	60	*73-75
HAD9742A	0	60	73
NAD6502AR	0	60	100
PMAD4012A	0	60	84
PMAD4042A	0	60	100
PMAD4014A	0	60	100

(*) Depending on applicable offered battery

1.2 Face

DUT with antenna NAD6502AR with offered battery PMNN4098A separated 2.5cm from the phantom without an audio accessory attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
NAD6502AR	*32-34	35	*38-41
HAD9742A	33	35	38
HAD9743A	33	35	38
PMAD4012A	33	35	40
PMAD4042A	33	35	40
PMAD4014A	33	35	42

(*) Depending on applicable offered battery

1.3 Head
Not applicable.

1.4 Hand
Not applicable

2.0 Other SAR tested positions at the body

2.1 Body worn

DUT with antenna HAD9742A with offered battery NNTN4970A and body worn kit RLN5644A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9742A	*2-3	*32-34	*45-47
HAD9743A	2	32	43
PMAD4012A	2	32	47
PMAD4042A	2	32	57
PMAD4014A	2	32	57
NAD6502AR	2	32	57

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery PMNN4098A and body worn kit HLN8255B against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	8	*32-35	*38-40
HAD9742A	8	32	40
PMAD4012A	8	32	43
PMAD4042A	8	32	51
PMAD4014A	8	32	47
NAD6502AR	8	32	50

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery NNTN4970A and body worn kit HLN6602A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	*10-12	*23-25	*25-27
HAD9742A	10	23	25
PMAD4012A	10	23	25
PMAD4042A	10	23	25
PMAD4014A	10	23	25
NAD6502AR	10	23	20

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery PMNN4098A and body worn kit RLN4815A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	10	40	*44-45
HAD9742A	10	40	45
PMAD4012A	10	40	45
PMAD4042A	10	40	47
PMAD4014A	10	40	45
NAD6502AR	10	40	43

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery PMNN4072A and body worn kit RLN4570A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	0	*20-23	*24-26
HAD9742A	0	20	24
PMAD4012A	0	20	26
PMAD4042A	0	20	33
PMAD4014A	0	20	33
NAD6502AR	0	20	27

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery NNTN4851A and body worn kit RLN5384B w/ NTN5243A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	0	*48-52	*66-68
HAD9742A	0	48	66
PMAD4012A	0	48	70
PMAD4042A	0	48	82
PMAD4014A	0	48	82
NAD6502AR	0	48	84

(*) Depending on applicable offered battery

DUT with antenna HAD9743A with offered battery PMNN4098A and body worn kit HLN9701B w/ NTN5243A against the phantom with an audio accessory PMMN4092A attached. Same position used for the other applicable offered antennas and batteries.



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
HAD9743A	*10-12	*38-40	*46-48
HAD9742A	10	38	46
PMAD4012A	10	38	50
PMAD4042A	10	38	56
PMAD4014A	10	38	56
NAD6502AR	10	38	52

(*) Depending on applicable offered battery

2.2 Front Side against phantom
Not applicable.

2.3 Back side against phantom
Not applicable.

2.4 Front 2.5cm separation
Not applicable

2.5 Antenna 2.5cm separation
Not applicable

2.6 Back 2.5cm separation
Not applicable

3.0 Other SAR tested positions at the face

3.1 Back of DUT at 2.5cm separation
Not applicable.

4.0 Other SAR tested positions at the head

4.1 Left ear touch
Not applicable.

4.2 Left ear tilt
Not applicable.

4.3 Right ear touch
Not applicable.

4.4 Right ear tilt
Not applicable.

5.0 Other SAR tested positions at the hand

5.1 Left side
Not applicable.

5.2 Right side
Not applicable.

- 5.3 **Top side**
Not applicable.
- 5.4 **Bottom side**
Not applicable.
- 5.5 **Back side**
Not applicable.

6.0 DUT and Accessory Photos

The purpose of these photos is to illustrate the tested accessories. Refer to Part 1 of 2, section 7.0 for additional details on the offered accessories.

6.1 Antenna dimension and photo(s):

Antenna Kit #	Physical Length (mm)	Electrical Length
HAD9742A	90	¼ wave
HAD9743A	80	¼ wave
NAD6502AR	150	¼ wave
PMAD4012A	90	¼ wave
PMAD4014A	140	¼ wave
PMAD4042A	140	¼ wave



Left to Right: NAD6502AR, PMAD4042A, PMAD4014A, PMAD4012A, HAD9742A, HAD9743A

6.2 Body worn accessories

Belt Clip RLN5644A



Back View



Side View

Belt Clip HLN8255B



Back View



Side View

HLN6602A



RLN4570A



HLN9701B



Front View

Back View

Side View

RLN5383A



Front View



Back View



Side View

RLN5384B



Front View



Back View



Side View

NTN5243A



RLN4815A



6.3 Battery accessories:



NNTN4497DR: Front View, Side View and Back View



NNTN4851A: Front View, Side View and Back View



NNTN4970A: Front View, Side View and Back View



PMNN4072A: Front View, Side View and Back View



PMNN4098A: Front View, Side View and Back View



PMNN4251AR: Front View, Side View and Back View



PMNN4253AR: Front View, Side View and Back View



PMNN4254AR: Front View, Side View and Back View



PMNN4258AR: Front View, Side View and Back View



PMNN4259AR: Front View, Side View and Back View



PMNN4450AR: Front View, Side View and Back View



PMNN4458BR: Front View, Side View and Back View

6.4 Audio accessories:



PMMN4092A

6.5 DUT Dimensions

	Height (mm)	Width (mm)	Depth (mm)
Radio only (w/o battery)	127	60	35
Radio with battery NNTN4970A	127	60	40.8
Radio with battery NNTN4497DR	127	60	43.5
Radio with battery NNTN4851A	127	60	42
Radio with battery PMNN4450AR	127	60	43.5
Radio with battery N PMNN4072A	127	60	42.4
Radio with battery PMNN4098A	127	60	41.3
Radio with battery PMNN4251AR	127	60	43.5
Radio with battery PMNN4253AR	127	60	40.8
Radio with battery PMNN4254AR	127	60	43.5
Radio with battery PMNN4258AR	127	60	43.5
Radio with battery PMNN4458BR	127	60	43.7
Radio with battery PMNN4259AR	127	60	43.5

For illustration purposes only - the following figure reflects the location of the device’s dimensions.



Note: H = Height; W = Width; D = Depth

$$W1 = (\text{Width @ Top}) / (\text{Width @ PTT})$$

$$D2 = (\text{Depth @ Bottom}) / (\text{Depth @ PTT})$$